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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/016,179	10/30/2001	Brian Pond	05236-1025	7667

27890 7590 07/01/2005

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EXAMINER	
PASSANITI, SEBASTIANO	

ART UNIT	PAPER NUMBER
3711	

DATE MAILED: 07/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/016,179	POND ET AL.	
	Examiner	Art Unit	
	Sebastiano Passaniti	3711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *see detailed Office action*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-10 and 12-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *34-39* is/are allowed.

6)☒ Claim(s) *1,3-10 and 12-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This Office action is responsive to communication received 06/02/2005 – Amendment.

The indicated allowability of claims 7 and 29 is withdrawn in view of the newly discovered reference(s) to SPIEGEL (U.S. Patent 5,935,015). Rejections based on the newly cited reference(s) follow. Any inconvenience to the applicant is sincerely regretted. It is further noted that a substantial portion of the previous Office action has to some extent been repeated below. In order to assist the applicant in identifying the newly incorporated portions of any newly added art rejections, an attempt has been made to highlight (bold and italics) those newly inserted portions into the Office action below.

Claims 2 and 11 have been canceled, as directed

Claims 1, 3-10 and 12-39 remain pending.

Following is an action on the MERITS:

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 7 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Spiegel ('015). Figures 1 and 4 show a toe section, heel section, rear-cavity insert (28) and a center section (24) that connects the heel and toe section and is configured to receive and hold the insert (28). See col. 2, lines 51-60. The insert (28) integrally includes a transparent portion (30). Note sight line or groove (36) which is incorporated within the floor portion of insert (28), as indicated in col. 3, lines 29-36. In essence, the bottom or floor of the club head directly beneath the insert (28), considering that the insert (28) is integrally attached to the club head floor, provides that the sight line or groove (36) is a part of the club head floor.

Claims 1, 3, 4, 5, 6, 8, 9, 10, 16, 17, 18, 19 and 20 STAND rejected under 35 U.S.C. 103(a) as being unpatentable over Kubica in view of Cochran. The patent to Kubica shows every feature claimed except for explicitly stating that the combined weight of the toe and heel sections comprises at least 80%, as required by claim 1, or 90%, as required by claim 3. In addition, Kubica fails to detail ***a substantially transparent rear insert and*** the dimensional features of the cavity and the dampener, as required by claims 4 and 19, respectively. Kubica further fails to detail the specific material make-up required by claim 18. Note, Kubica indicates that the insert (60) may range from four to thirty grams and that the iron-type club head used may be one of any

iron-type club heads from a one-iron to a wedge. See col. 1, lines 59-67 and col. 3, lines 7-27 in Kubica. Typically, the average weight of an iron-type club head is bout 200 grams. This fact is supported by, for example, a teaching in Cochran, which shows it to be old in the art to include a weight for a club head that is generally the same as a conventional or commonly found iron-type head. See col. 2, lines 42-51 in Cochran. The Cochran teaching indicates that conventional club heads weight between 4 and 12 ounces (between 113 and 340 grams) for a two-iron, for instance. Assuming an average weight, as mentioned supra, of about 200 grams, and considering that the Kubica club head is perimeter weighted and further considering the negligible weight provided by the insert (60), it is clear that the Kubica club head includes at least about 805 and more specifically 90% of the head weight between the combined toe and heel ends. Even, in arguendo, if one argues that Kubica does not imply that 80% - 90% of the head is concentrated in the combined heel and toe areas, the skilled artisan would have found it obvious to provide a higher concentration of weight at the heel and toe ends, merely to increase the moment of inertia. In this regard, Cochran clearly serves as a motivational teaching that the weight at the heel and toe ends should be enhanced to maximize the radius of gyration. As for the remaining limitations in the claims and with respect to the Kubica patent, note that Kubica shows an insert (60) that is made of plastic material. ***Inasmuch as plastic materials that are commonly available are in fact made to be transparent, the skilled artisan would have found it obvious to use a substantially transparent material for insert (60) simply for convenience, as the transparent nature of the rear-insert serves no other purpose in this specific***

claimed structure. Insofar as claims 5, 6 and 20, the plastic insert clearly serves to increase the natural frequency of the head (claim 5), to dampen a vibration generated in the striking face (claim 6) and for changing a sound emitted by the golf club head (claim 20). Moreover, it is noted that these limitations in claim 5, 6 and 20, respectively, and namely, "for increasing a natural frequency", "for dampening a vibration" and "for changing a sound emitted by the golf club head when a golf ball is struck" are merely functional in nature. As to claims 8 and 9, the insert (60) may weigh between four and thirty grams (col. 3, line 14 in Kubica). As to claim 16, Kubica shows an iron-type club head. As to claim 17, note that the insert (60) is secured within the cavity at the rear of the head using epoxy material (col. 3, lines 3 and 4 in Kubica). Here, epoxy is considered to be a dampener connecting the rear insert in the cavity. Regarding claims 4 and 19, the claimed dimensional limitations are not deemed critical, as the size of the cavity including the cavity floor, ***which in Kubica may be identified as lower surface (44)***, back and sides along with the dimensions of the dampener material would have depended upon the size limitations of the club head. In other words, the skilled artisan would have found it obvious to change these parameters as needed depending upon the size or style of club head used. As to claim 18, while Kubica simply notes that the insert (60) is made of plastic, the skilled artisan would have found it obvious to select any suitable polymer material based upon the characteristics of the material. Note, the Patent laws have long established that the selection of a material to take advantage of its natural properties would have been obvious to one of ordinary skill in the art at the time of the invention. See In re Hopkins 145 USPQ 140.

Claim 12 STANDS rejected under 35 U.S.C. 103(a) as being unpatentable over Kubica in view of Cochran and McGeeney. Kubica in view of Cochran has been discussed above. Kubica, as modified, does not explicitly detail a powder metallurgy process. The skilled artisan would have found it obvious to select a suitable material and associated manufacturing process based upon the availability of materials known in the art and any cost considerations. Note that the teaching reference to McGeeney obviates the use of a powder metallurgy process in the golf club head art, as McGeeney makes use of this process to fabricate at least a portion of the head (col. 5, lines 26-46).

Claims 14 and 15 STAND rejected under 35 U.S.C. 103(a) as being unpatentable over Kubica in view of Cochran and Buettner. Kubica in view of Cochran has been discussed above. Kubica, as modified, does not expressly state that a vapor deposition is employed on at least a portion of the head. The use of a vapor deposition process using, for example, titanium material as the coating, on a golf club head to impart a tough, hard, low friction and lustrous outward look is obviated by the patent to Buettner (see col. 3, lines 40-52). Thus, the skilled artisan would have been motivated to further modify the club head in Kubica using a vapor deposition process to coat the head with an appropriate material for the reasons advanced in Buettner.

Claims 21, 22, 23, 24, 27, 28, 30 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rudell. As to claim 21, note that Rudell includes a heel section, a toe section and a central section that joins the toe and heel sections, with the central portion including a cavity rearward of the front face and containing a rear-insert (17). The front face surface (33) includes a "face-insert" in the form of a wood surface

portion (32). As the wood surface portion (32) may be secured via a tongue-and-groove connection, the wood surface portion (32) may clearly be interpreted as a "face-insert". ***Note the language in col. 4, lines 40, 50 in Rudell and detailing that a sole may extend across the entire bottom surface. With this interpretation, the sole forms a "floor" within which a cavity is formed and upon which an insert (17) is positioned. Inasmuch as plastic materials that are commonly available are in fact made to be transparent, the skilled artisan would have found it obvious to use a substantially transparent material for the rear insert (17) simply for convenience, as the transparent nature of the rear-insert serves no other purpose in this specific claimed structure.*** As to claim 22, though the specific claimed material for the face-insert is not detailed by Rudell, it is noted that Rudell instructs the skilled artisan to fabricate the diverse parts of the club head from any one of a number of well-known materials (col. 5, line 48 through col. 7, line 13). As such, the skilled artisan would have found it obvious to modify the device in Rudell to take advantage of any one of a plethora of available light weight non-metallic materials for the face-insert in order to maintain the weight requirements of the head. Moreover, the selection of a material to take advantage of its natural properties, in this case, the selection of a light weight material, would have been obvious to the skilled artisan based upon the Patent law established by In re Hopkins 145 USPQ 140. As to claims 23 and 24, reference is made to Figure 4, wherein Rudell clearly shows that the face-insert (32) comprises at least 50% of the surface area of the front face and more particularly between about 45% and 75% of the surface area of the strike face. As to claim 27, since the club head

(and the insert, as defined herein) may be made from any one of a number of materials (col. 5, lines 48-58), it is clear that the insert (17) may increase the natural frequency of the head. Moreover, the language in claim 27, "for increasing a natural frequency of the golf club head" is only functional in nature. As to claim 28, the insert (17) is coupled to the back face, rearward of the striking surface. Also, the language in claim 28, "for dampening a vibration generated in the strike face when a golf ball contacts the strike face" is merely functional in nature. As to claim 30, the shaft (13) is positioned within the insert (17). As to claim 32, Rudell shows a putter-style club head.

Claim 25 STANDS rejected under 35 U.S.C. 103(a) as being unpatentable over Rudell in view of Fisher. To have modified the device in the cited art reference to Rudell by replacing the face-insert (33) with another face-insert having the claimed Bayshore rebound in order to alter the ball-striking characteristics of the head would have been obvious in view of the patent to Fisher, which shows it to be old in the art of putter heads to include a face portion with a specific ball-impacting rebound factor that may be varied to accommodate the hardness level of the face with which a golfer is most comfortable. See col. 2, lines 24-37 along with col. 8, lines 26-40 in Fisher.

Claims 1, 6, 10, 13, 16 and 26 STAND rejected under 35 U.S.C. 103(a) as being unpatentable over Rudell in view of Reiss. The patent to Rudell does not detail specific weight percentages for the toe and heel. Reiss shows it to be old in the art to heavily weight the ends of a putter head, with the weight of the heel and toe making up between about 60% and 90% of the weight of the head (col. 1, lines 51-67). Reiss desires to enhance the moment of inertia by concentrating the weight of the head at the extreme

toe and heel ends, thereby enlarging the "sweet spot". In view of the patent to Reiss, it would have been obvious to modify the Rudell device to include at least 80% and further at least 90% of the club head weight at the toe and heel ends, the motivation being to increase the size of the sweet spot and increase the club head's resistance to rotation during off-center shots. Regarding the remaining limitations in the claims and with respect to the Rudell patent, note the following: As to claim 1, one interpretation of Rudell, given the broad interpretation of "cavity" in claim 1, finds that Rudell includes a toe portion (21) along with heel portion (19). Central portion (23) extends between the toe and the heel and forms a rearward cavity that contains "insert" (17). ***Alternatively, note the language in col. 4, lines 40, 50 in Rudell and detailing that a sole may extend across the entire bottom surface. With this interpretation, the sole forms a "floor" within which a cavity is formed and upon which an insert (17) is positioned.*** As to claim 6, the insert (17) is coupled to the back face of the head, with the back face located opposite to a front ace (33). As to claim 10, the head may be made entirely of aluminum (col. 5, lines 48-51). Thus, the insert, as defined above, is formed of aluminum. As to claim 13, note col. 8, lines 25-33, wherein Rudell indicates that a hosel and shaft arrangement may be employed instead of simply a shaft connection. In this manner, the hosel would indeed be positioned in the insert. As to claim 16, Rudell shows a putter-style club head.

Claim 31 STANDS rejected under 35 U.S.C. 103(a) as being unpatentable over Rudell in view of Buettner. Although Rudell does not expressly state that a vapor deposition is employed on at least a portion of the head, Rudell does imply that any one

of a number of finishing processes may be used for the head depending upon the material selection thereof. See col. 7, lines 3-14 in Rudell, wherein it is stated that a highly polished appearance for the head is desirable and that an anodized aluminum or other material provided with a suitable surface treatment is preferred. The use of a vapor deposition process using, for example, titanium material as the coating, on a golf club head to impart a tough, hard, low friction and lustrous outward look is obviated by the patent to Buettner (see col. 3, lines 40-52). Thus, the skilled artisan would have been motivated to modify the club head in Rudell using a vapor deposition process to coat the head with an appropriate material for the reasons advanced in Buettner.

Claims 21, 23, 24, 27, 28, 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ebbing. As to claim 21, note that Ebbing includes all of the recited features except for a substantially transparent rear insert. Note face-insert (18). Figure 4 clearly shows that at least one of the rear inserts (44) is held within a cavity that is in-part formed by a floor portion. Note that Ebbing details that the inserts (44) may be of any suitable form (col. 5, lines 8-20). Inasmuch as plastic materials that are commonly available are in fact made to be transparent, the skilled artisan would have found it obvious to use a substantially transparent material for the rear inserts (44) simply for convenience, as the transparent nature of the rear-insert serves no other purpose in this specific claimed structure. As to claims 23 and 24, Figures 1, 2 and 3 in Ebbing clearly show that the face-insert (18) comprises at least 50% of the surface area of the front face and more particularly between about 45% and 75% of the surface area of the strike face.

As to claim 27, here again the at least one of said inserts (44) naturally increases the natural frequency of the head, as broadly as claimed. Note, the language in claim 27, "for increasing a natural frequency" is set forth as an intended use. As to claim 28, at least one of the insert (44) is indeed coupled to the back face (see Figure 3). As to claim 32, the Ebbing device shows a putter-style club head. As to claim 33, a dampener material in the form of a rubber cushioning may couple the at least one of the inserts (44) to the cavity (col. 5, lines 8-26).

At this time, claims 34-39 appear to be allowable over the prior art references of record, as none of the prior art references of record show, suggest or render obvious the combination of a toe section, heel section and center section, as claimed, with the toe and heel comprising at least 80% of the head weight, and further including a transparent insert in combination with a sight line on the floor of a cavity located in the center section, as completely as claimed.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Note insert (20) in Cheng. See inserts (15, 17) in Relle. Note flexible member (47) and face insert (35) in Yamada. Jernigan shows a transparent rear portion in a cavity. Hoburg shows a transparent insert with alignment indicia incorporated therein.

RESPONSE TO ARGUMENTS

In the arguments received 06/02/2005, the applicant notes that claims other than claims 7 and 29, which were previously held to be allowable, have been amended to include limitations regarding the transparent rear insert and the floor. No comments have been directed to any specific piece of prior art cited.

In response to these arguments, applicant's attention is drawn to the new rejection of claims 7 and 29, supra. In addition, the amendment of certain claims to include further limitations regarding the transparency of the rear insert and the location of the floor do not distinguish over the prior art references of record. The action, supra, details how the prior art of record shows or obviates the inclusion of both a substantially transparent rear insert and a floor. No further explanation is deemed necessary, here.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sebastiano Passaniti whose telephone number is 571-272-4413. The examiner can normally be reached on Monday through Friday (6:30AM - 3:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Vidovich can be reached on 571-272-4415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sebastiano Passaniti
Primary Examiner

S.Passaniti/sp
June 29, 2005